

IN THE SPECIFICATION

Please amend the specification at paragraphs [0006], [0042], [0044] and [0045] as follows:

[0006] It is an object of the invention to appropriately distribute processing power of processing units such as the CPUs, which control electromagnetically driven valves. It is another object of the invention to provide a technology for driving the electromagnetically driven valves, in which the electromagnetically driven valves are effectively controlled or operation noise is reduced while suppressing an increase in the number of the processing units.

[0042] The electromagnetically driven valve 200 includes a valve shaft 20, a valve element 16, and an electromagnetically electromagnetic drive portion 21. The valve shaft 20 is supported by a cylinder head 18 so as to be capable of reciprocating. The valve element 16 is provided at an end point of the valve shaft 20, which is shown in a lower portion of FIG. 2. The electromagnetically electromagnetic drive portion 21 drives the valve shaft 20. In the cylinder head 18, an intake port 14, which leads to a combustion chamber, is formed. A valve seat 15 is formed in the vicinity of an opening portion of the intake port 14. When the valve element 16 is seated on the valve seat 15, or is moved away from the valve seat 15 due to the reciprocation of the valve shaft 20, the intake port 14 is closed or opened.

[0044] The electromagnetically electromagnetic drive portion 21 includes an armature shaft 26 that is provided coaxially with the valve shaft 20. An armature 28 is fixed at a substantially center portion of the armature shaft 26. The armature 28 has a disc shape, and is made of material having high magnetic permeability. An upper retainer 30 is fixed at one end of the armature shaft 26. In the armature shaft 26, an end portion which is opposite to the end portion at which the upper retainer 30 is fixed contacts the end portion of the valve shaft 20 on the lower retainer 22 side.

[0045] In a casing 36 of the electromagnetically electromagnetic drive portion 21, an upper core 32 is fixed between the upper retainer 30 and the armature 28. Also, in the casing 36, a lower core 34 is fixed between the armature 28 and the lower retainer 22. Each of the upper core 32 and the lower core 34 is formed of material having high magnetic permeability so as to be annular. The armature shaft 26 penetrates a center portion of each of the upper core 32 and the lower core 34.